of energy and high spirits; and at the time of his death he was President of both Warwickshire societies.

Mr. Brodie was the author of many geological papers communicated to the Geological Society, the British Association, and various scientific journals. In 1887 the Council of the Geological Society awarded to Mr. Brodie the Murchison Medal for his long and valuable geological labours; an agreeable testimony to good work achieved by one who, all his life, was a dweller in the provinces.

H. B. W.

NOTES.

The Royal Society's medals have this year been adjudicated by the President and Council as follows:—The Copley Medal to Prof. Albert von Kölliker, Foreign Member R.S.; a Royal Medal to Prof. Andrew Russell Forsyth, F.R.S.; a Royal Medal to Lieut.-General Sir Richard Strachey, F.R.S.; the Davy Medal to Dr. John Hall Gladstone, F.R.S.; the Buchanan Medal to Sir John Simon, F.R.S. Her Majesty has signified her approval of the award of the Royal Medals.

The following is a list of those who have been recommended by the President and Council of the Royal Society for election into the Council for the year 1898 at the anniversary meeting on November 30:—President: Lord Lister. Treasurer: Sir John Evans, K.C.B. Secretaries: Prof. Michael Foster, Prof. Arthur William Rücker. Foreign Secretary: Sir Edward Frankland, K.C.B. Other Members of the Council (the names of new Members are printed in italics): Prof. William Grylls Adams, Prof. Thomas Clifford Allbutt, *Sir Robert Stawell Ball*, *Rev. Thomas George Bonney*, *Prof. John Cleland*, Prof. Robert Bellamy Clifton, Prof. James Alfred Ewing, *Alfred Bray Kempe*, *John Newport Langley*, *Joseph Larmor*, *Prof. Nevil Story Maskelyne*, Prof. Raphael Meldola, *Prof. Edward Bagnall Poulton*, *William James Russell*, *Dukinfield Henry Scott*, Prof. Walter Frank Raphael Weldon.

We learn from the *Times*, with regret, that in consequence of the heavy demands on his time in connection with his duties at the Natural History Museum, Sir William Flower, acting on medical advice, has reluctantly resigned the presidency of the International Congress of Zoology, which is to meet at Cambridge on August 23, 1898. Sir John Lubbock, on the unanimous invitation of the General Committee, has accepted the office, and will accordingly preside over the Congress.

We announce with great regret the death, on October 31, of Prof. Haughton, of Trinity College, Dublin. We hope in a subsequent number to publish an obituary notice of Prof. Haughton.

It is with much regret that we record the death of Herr Geheimrath Prof. Ernst Schering, of Göttingen, who passed away at Göttingen on November 2, at the age of sixty-four, after a long illness. Schering, besides being professor of mathematics at the University, was director of the Magnetic Department of the Observatory, the seat of Gauss' monumental researches in this branch of science.

The Queen has conferred the Jubilee Medal upon Prof. W. R. Smith, the President of the Royal Institute of Public Health; Sir George Duffey, President of the Royal College of Physicians, Ireland; Sir William Thomson, President of the Royal College of Surgeons, Ireland; and Mr. Walter Hills, President of the Pharmaceutical Society of Great Britain.

Prof. A. A. Michelson, of the University of Chicago, has been elected a member of the International Committee of Weights and Measures, in the place of the late Dr. B. A. Gould.

Prof. Henry S. Pritchett, of Washington University, St. Louis, has been appointed superintendent of the U.S. Coast and Geodetic Survey, as successor to General Duffield.

Mr. Edgar Worthington has been elected secretary of the Institution of Mechanical Engineers, in the place of Mr. Alfred Bache, who has retired on account of ill-health.

Sir William Gowers is to be entertained at dinner by the Society of Medical Phonographers on November 25. The dinner, over which Sir William Broadbent will preside, is to take place at Limmer's Hotel, and has been arranged for the purpose of congratulating Sir W. Gowers upon his honour of knighthood.

The members of the Gerlache Antarctic expedition were entertained at Rio de Janeiro by President Moraes, and left on October 28 for Buenos Ayres, *en route* to the Antarctic region.

On the day of his arrival in New York, Dr. Nansen was the guest of the American Geographical Society, which elected him an honorary member and conferred upon him the Cullum Geographical Medal. He was subsequently the recipient of receptions by the Swedish and Norwegian inhabitants of the city, and the National Geographical Society, Washington, and read a paper on "Some of the Scientific Results of Recent Arctic Explorations" before a special meeting of the American Philosophical Society of Philadelphia. He delivered his first public lecture at New York on November 6.

A Reuter telegram from Rome states that for some days past Vesuvius has been in active eruption, and large quantities of lava have been pouring from the crater called Atrio del Cavallo, which was opened in 1895. The lava has divided into two large streams flowing towards Vitrava and the country north of Piano del Tristre respectively, the latter current having again divided into two. The central crater is also distinctly active, throwing forth ashes and lava at frequent intervals.

On Friday last the inaugural meeting of the recently constituted Röntgen Society took place at St. Martin's Town Hall, when Prof. Silvanus P. Thompson delivered his presidential address, particulars of which we gather as follows from the *Times*. After giving an account of the circumstances in which Prof. Röntgen made his famous discovery nearly two years ago, and referring to the antecedent investigators of whose work that discovery was a development, Prof. Thompson proceeded to make a brief review of what has been achieved with respect to X-radiations. He first discussed the improvements which have been made in appliances, such as in the construction of the tubes, in the materials used for fluorescent screens, in photographic plates, and in the methods of exciting the tubes. Turning to advances in results attained and to applications of the discovery, he said that, excepting only Lister's introduction of antiseptics and the discovery of anæsthetics, no discovery in the present century had done so much for operative surgery as that of the Röntgen rays. The first great application of the rays had been to the diagnosis of dislocations and fractures, the study of bone disease, and the detection of foreign bodies in various parts of the human frame. The localisation of foreign bodies embedded in more transparent tissue had claimed the attention of many surgeons. In this department Mr. Mackenzie Davidson had devised an ingenious apparatus by which any intelligent person could at once localise to within one-hundredth of an inch the exact position, say, of a needle in the hand or foot, the complicated geometry of oblique projection being simplified down by the instrument itself, and reduced to the application of callipers and a divided scale. As regards the physical problems presented by the rays, while there was much progress to chronicle, there was also a vast prospect opening out of problems awaiting solution. The rays had been found to possess a dissociating, or, more strictly, an ionising effect on the molecules of gases through which they passed, with the result that electrified bodies placed in an atmosphere thus affected were discharged. Further, it was now generally admitted that the rays were not themselves homogeneous—that they were of many kinds, differing in penetrative power, the quality of the mixture depending on the state of the vacuum as well as on the form of the tube and the nature of the emitting surface. The relations between the Röntgen and the kathode rays had been investigated, and important contributions to our knowledge had been made by Mr. A. A. Campbell Swinton, by M. Perrin, and by several Italian investigators. Many speculations had been put forward as to the physical nature of the rays themselves. Crookes, Tesla, and others held them to consist of flights of minute atoms or hyperatoms; on the other hand, there was an hypothesis that they were merely an extreme sort of ultra-violet light, consisting of transverse waves of excessively minute wave length. Jaumann and, apparently, Röntgen regarded them as due to longitudinal vibrations, while Sir George Stokes had put forward the view that they might be transverse waves, not in regular trains, but consisting of innumerable solitary waves. Another wide field of research was opened up by the discovery of other analogous kinds of rays. That the salts of uranium, glow-worms, fireflies, and sticks of phosphorus should be able without any electrical stimulation to give out rays that could produce photographic action through substances that were opaque to every known kind of light was very suggestive, but such rays were not Röntgen rays, and obeyed different laws. It was clear, he concluded, that their little Society had an abundant field.

A small marine laboratory was opened at Cullercoats on the 21st ult. by Principal Gurney, of the Durham College of Science, Newcastle-on-Tyne. It will form a most useful adjunct to the biological department of the college, as well as a centre for the investigations which have been, and are still being carried on by the Northumberland Sea Fisheries Committee. The district owes the laboratory to the public-spirited generosity of John Dent, Esq., J.P., the Vice-Chairman of the Committee, who has already made excellent contributions to the knowledge of the local condition of the in-shore waters by the trawling excursions which have been carried on since 1892—the year after the three-mile restriction was adopted. The laboratory was formally handed over to the Sea Fisheries Committee, to be worked in conjunction with the Durham College of Science, Mr. Meek being placed in charge of the scientific operations. A large company assembled, representing the Sea Fisheries Committee, the College of Science, the Natural History Society, and the County Council.

The inaugural meeting of the seventeenth session of the Institution of Junior Engineers took place in London on Friday last, when Sir Alexander Binnie, the retiring president, presented the Institution premium to Mr. W. R. Beckton for his paper on "The Protection of Buildings from Fire," after which an address, on "Some Aspects of Railway Work," was delivered by Mr. J. A. F. Aspinall, the newly-elected president.

The twenty-fifth anniversary meeting of the American Public Health Association was held at Philadelphia, October 26–29, Dr. Henry B. Horlbeck, of Charleston, S.C., presiding. Dr. Irving A. Watson, of Concord, N.H., who has for many years acted as secretary, resigned, and was succeeded by Dr. C. O. Probst, of Columbus, O. Among the subjects to which special attention was given were tuberculosis, yellow fever, typhoid fever, and purification of water supply. A sanitary exhibition was held in connection with the meeting.

The *British Medical Journal* understands that Dr. Wright, the Professor of Pathology at Netley, has had an interview with the Commander-in-Chief on the subject of immunising our troops by vaccination against typhoid. Prof. Wright inoculated all the last batch of candidates for the Indian Medical Service, as well as himself and Surgeon-Major Semple. Lord Wolseley's views on the desirability of affording the protection by vaccination against typhoid to our troops are not yet announced. Any measure that gives a fair chance of mitigating the ravages of enteric among our young soldiers in India is worth a trial, provided no immediate danger or risk is incurred thereby, and no such danger attends the inoculations made in the manner devised by Prof. Wright.

At a recent meeting of the New York Zoological Society, it was reported by the executive committee that the plans for the zoological park are practically complete, and that it is imperative that the remainder of the first 20,000*l*. of the building fund should be subscribed at once in order that the plans may be submitted to the Park Board without delay.

Mr. E. E. Howell, of Washington, according to *Science*, has received from the U.S. Government Board of Control an order to construct a relief map of the Yellowstone National Park, for exhibition at the coming Exposition at Omaha. This model, which will be 6 by 6½ feet in dimensions, will be based upon the surveys made by the U.S. Geological Survey, and will represent the geology as well as the topography of the park. The scale will be one inch to the mile, and there will be no vertical exaggeration. The map will, it is said, be very accurate and complete, far surpassing the one made some years ago.

It is stated that there will shortly be placed on the streets of Paris a number of electric cabs, similar to those with which Londoners are now so familiar. One of the largest Paris cab companies is said to have ordered the construction of 100 of the vehicles.

The Guildford Natural History Society have decided to present a petition to the Commissioners of Woods and Forests, praying that Walmer Forest may be reserved as a sanctuary for wild birds, in which they, their nests, and eggs, may remain unmolested throughout the year; that it may not be let at any time for game preserving, or for any purpose inimical to bird life; and that it may remain in perpetuity as a national memorial to the great outdoor naturalist—Gilbert White of Selborne, whose observations were made in its neighbourhood.

The *Journal of the Society of Arts* for the current week publishes a list of the Society's lecture arrangements for the session which is to open on the 17th instant, and from this we extract the following information. Before Christmas a lecture will be delivered by Prof. James Douglas, on "Progress of Metallurgy and Metal Mining in America during the last Half-Century"; and there will be one by Dr. S. Rideal, on "The Purification of Sewage by Bacteria." Among the papers that will be given after Christmas we notice the following:—"The Projection of Luminous Objects in Space," by Eric Bruce; "Aeronautics," by Captain B. Baden-Powell; "The Recent History of Papermaking," by Clayton Beadle; "The Preparation of Meat Extracts," by C. R. Valentine; "Children's Sight," by R. Brudenell Carter. Courses of Cantor Lectures are announced as follows:—"Gutta-Percha," by Dr. E. F. A. Obach; "The Thermo-Chemistry of the Bessemer Process," by Prof. W. N. Hartley; "India-Rubber," by Dr. D. Morris; "Electric Traction," by Prof. Carus Wilson. Two lectures, suitable for a juvenile audience, will be delivered on January 5 and 12, by Prof. William Ramsay, on "Fire."

THE list of lectures to be delivered at the London Institution from November to February next has been issued, and comprises, among others, discourses on "Signalling across Space," by Prof. Silvanus P. Thompson; "On the Frontier of History in Britain," by Prof. Boyd Dawkins; "The Weather Office and its Work," by Charles Harding; "Microbes—Friendly and otherwise," by Prof. W. B. Bottomley; "My Scrambles amongst the Alps," by E. Whymper; "The Position of the Mammalia in the Animal Series," by Prof. G. B. Howes; "Haunts and Habits of British Birds," by R. Kearton; "Incandescent Gas Lighting," by Prof. Vivian Lewes; "Geological Changes beneath the Ocean," by Prof. John Milne; "The First Crossing of Spitsbergen," by Sir W. Martin Conway. The Christmas course for juveniles will be by Mr. F. Enock, who will speak on "Insects at Home, at Work, and at Meals."

PARTICULARS of lectures to working men, in connection with the Royal College of Science, London, have been published. The first course is to be given by Prof. G. B. Howes, and will consist of six lectures dealing with "The Kinship of the Vertebrata." The first lecture will be delivered on Monday, November 15. Subsequent courses will be given by Prof. Le Neve Foster, on mining, and by Prof. Tilden, on chemistry.

THE Sunday Lecture Society has arranged for the delivery, before Christmas, of the following science lectures on Sunday afternoons, at 4 o'clock, in St. George's Hall, Langham Place. On November 14, "Andrée and the North Pole: a Problem of to-day," by A. Montefiore Brice; November 21, "Wireless Telegraphy," by R. Kerr; November 28, "The Land of Dragon Trees," by Dr. D. Morris; December 12, "Colour," by Dr. C. W. Kimmins; December 19, "Some Animal Co-operative Societies," by Dr. Andrew Wilson.

IT will be remembered that in 1895 the original MS. of Gilbert White's "Natural History of Selborne" was sold by Messrs. Sotheby for £294. It is now announced that the same firm will, on November 25, offer for sale an even more interesting batch of writings by the same author. These MSS. are the original letters which were sent by post by Gilbert White to Thomas Pennant between August 10, 1767, and July 8, 1773. These letters were returned to Gilbert White when he first conceived the idea of writing his famous natural history, and from them was drawn up the autograph MS. sold in 1895. The letters are all holograph but four, which are in the handwriting of an amanuensis, signed by Gilbert White, and all but three occupy four pages folio. They are additionally interesting and valuable from the fact that many of the details recorded in them were altered, omitted, or augmented in the published work. The second lot of Gilbert White MSS. is "A Garden Kalendar," dating from 1751 to 1767. It is the author's holograph manuscript, and occupies 424 pages. This has never been published, excepting the portion May 1 to November 16, 1759; it is in the form of a consecutive diary, recording the writer's almost daily operations on his own land, and notes of the results of experiments tried by him in forcing and hothouse work. All the MSS. have been continuously in the possession of the White family.

THE twentieth annual meeting of the Indian Association for the Cultivation of Science was recently held at Calcutta, and a copy of the report adopted upon that occasion is before us. In the course of the year covered by the report, lectures were delivered before the Association upon various divisions of physical and natural science. The Association does not appear, however, to be in a very flourishing condition, and it needs more financial support to put it on a satisfactory basis. In an oration characteristically Indian, the Honorary Secretary urged the necessity of national support in order to make the Institution worthy of India, and pleaded for the endowment of a Science Institute in the metropolis of India. One passage from this aspiring address reads thus:—"Whether our Association will endure to continue to be the regenerating influence for our country may still be in the region of doubt; but if the relationship of cause and effect be eternal, then I can assure you, gentlemen, that circumstanced as our country is it will have to advance, unless otherwise doomed by an eternal decree—it will have to advance, I say with all the emphasis in my power, through the regenerating influence of science and of science alone, and that, therefore, other but similar institutions will have to take the place of ours." Surely such zeal for the cultivation of science, and faith in the social influence of scientific thought, will not go unrewarded.

THE Meteorological Commission of the Cape of Good Hope have published a valuable discussion of the rainfall of Cape Colony for the ten years 1885-94, based upon the monthly and yearly averages for 278 stations, and accompanied by sixteen explanatory maps. The work has been prepared by Dr. Buchan, and has, therefore, every guarantee of scientific accuracy. We extract a few brief notes from his remarks. The annual map shows that the distribution of rainfall over South Africa to the north of the latitude of Clanwilliam (32° 10′ S.) steadily increases from west to east, the amount on the Atlantic coast falling short of 5 inches; whereas on the east coast, for some distance to the north and south of Durban, it exceeds 40 inches. The smallest mean annual rainfall is 2·45 inches at Port Nolloth; it rises above 10 inches over the eastern and southern regions and above 20 inches in certain restricted regions, including Kimberley and the Cape. In the south-east some places have a mean range above 30 inches, the largest being 38·10 inches at Kologha (lat. 32° 31′ S., long. 27° 21′ E.). The heaviest rainfalls in any year are reported from the south-west of the Colony, and the least in the north-west; at Port Nolloth the fall in the driest year does not amount to an inch. Dr. Buchan traces the causes of the very variable rainfall to the geographical distribution of pressure with the resultant winds therefrom, and to the geographical distribution of temperature.

WE are sorry to notice the report that, owing to the present condition of the sugar industry, the publication of *Timehri*, the organ of the Royal Agricultural and Commercial Society of British Guiana, is to cease with the December number. We have on many occasions drawn attention to the magazine, in the contents of which is always to be found something of interest and scientific value.

UNDER the name *Capra mengesi*, Prof. Dr. Noack, of Brunswick, has recently described a new Arabian wild goat, of which he has obtained specimens from Herr J. Menges, the well-known German traveller and collector. The wild goat of Sinai (*Capra sinaitica*) was known to extend along the mountains down the eastern side of the Red Sea, but this new species is from the Hadramaut range on the coast of the Indian Ocean, which was recently visited by the late Mr. Bent, but apparently still requires further investigation. Prof. Noack also describes a new wolf (*Canis hadramauticus*), from the same district.

Petermann's Mittheilungen contains an able paper, by Dr. Gerhardt Schott, on the currents of the Great Banks of Newfoundland. The most interesting results, obtained from discussion of an immense number of observations, are (1) confirmation of the fact that the so-called "Gulf Stream" does not exist as a warm current east of 40° W., and has no rapid movement east of 60° W.; (2) the Labrador current does not anywhere touch the United States seaboard, and has nothing to do with the "cold wall"; (3) on the bank itself there is practically no current. It appears, unfortunately for navigation, that the positions of the warm and cold streams are not liable to definite changes with the seasons, but are irregular movements difficult to account for.

Dr. Otto Nordenskjöld publishes a short preliminary account of the recent Swedish expedition to Tierra del Fuego, in *Petermann's Mittheilungen*. The expedition consisted of Dr. Nordenskjöld, Herr Dusén (botanist), Dr. Ohlin (zoologist), with two assistants and four porters, and its labours have extended over the summer seasons 1895–96 and 1896–97. From the brief notice published, we gather that contributions of considerable importance to various branches of science, especially, perhaps, geology have been made, the regions explored being of peculiar importance as a connecting-link with the great Antarctic continent.

In our issue of September 30 (vol. lvi. pp. 520 and 521) we printed a short illustrated account of "The Progress of the Steam Turbine," and many of our readers may like to know that the current issue of the *Electrical Review* contains the first instalment of a lengthy paper on the same subject, which was read a few weeks ago by the Hon. C. W. Parsons before the Institute of Marine Engineers at Stratford.

Part 7 of "Among British Birds in their Nesting Haunts, illustrated by the Camera," by Mr. O. A. J. Lee, has just come to hand. It contains ten plates, and deals with the common guillemot, mallard, razorbill, puffin, crested tit, and red-breasted merganser. The work is published by Mr. David Douglas, of Edinburgh.

A number of new editions of scientific works have lately been received. First among these publications is the third revised edition of Prof. E. Strasburger's "Kleine botanische Practicum für Anfänger" (Jena: Gustav Fischer). In the four years which have passed since the appearance of the second edition, new knowledge has been obtained and is incorporated in the present issue. The work contains 121 figures reproduced from drawings made by Dr. Strasburger, and the text likewise represents the personal observations of the author. Students of structural botany therefore will find the book a trustworthy guide.—A second enlarged edition has been published of Dr. W. Ostwald's text-book of analytical chemistry, entitled, "Die wissenschaftlichen Grundlagen der analytischen Chemie" (Leipzig: Wilhelm Engelmann). The book was reviewed at length in Nature (vol. li. p. 482) when it first appeared, and it has now been brought up to date. The chief addition refers to electrochemical analysis. The work is not intended for beginners, but to supply adequate theoretical support to the routine work of general analytical chemistry.—Messrs. J. and A. Churchill have published the third edition of "Elements of Human Physiology" by Dr. Ernest H. Starling. The first edition of the book was reviewed in Nature in December 1892 (vol. xlvii. p. 146), and the chief changes which it has undergone are in the account of the coagulation of the blood, and in the section on the central nervous system.—The elementary stage of the examination in magnetism and electricity, held by the Department of Science and Art, is well covered by the "Elementary Manual of Magnetism and Electricity" by Prof. Andrew Jamieson. The fourth edition, which has just been published by Messrs. Charles Griffin and Co., provides teachers of the subject with a very helpful text-book.—Messrs. Cassell and Co. have sent us a copy of "Electricity in the Service of Man" by Dr. R. Wormell, revised and enlarged by Dr. R. Mullineux Walmsley. We notice that, though the title-page is dated 1897, the preface is dated November 1893, With one or two slight exceptions, the book appears to represent the state of knowledge at the latter epoch.—A revised and enlarged edition of "A Text-book of Physics," by Prof. Edwin H. Hall and Mr. Joseph Y. Bergen, has come to us from Messrs. Henry Holt and Co., New York. The book is an admirable text-book and laboratory manual for beginners in the systematic study of physics. The course covered is that required for admission to Harvard College, where Dr. Hall is professor of physics; and it comprises the leading elementary facts and principles of physics, and quantitative laboratory work referring to them. Teachers of elementary physics in this country would do well to provide themselves with a copy of the book, for it contains numerous ingenious and instructive experiments.—The second edition of "The Practice of Massage: its Physiological Effects and Therapeutic Uses," by Mr. A. Symons Eccles, has been sent to us by Messrs. Baillière, Tindall, and Cox. The first edition was reviewed at length in Nature of September 3, 1896 (vol. liv. pp. 411 and 412), and we need now only say that the work has been revised and altered to make room for additional matter, especially with reference to the clinical uses of massage, without increasing the bulk of the volume.—The first part of the second edition of the serial issue of Mr. Howard Saunders's "An Illustrated Manual of British Birds" has reached us from Messrs. Gurney and Jackson. This well-known work, which has undergone revision, needs no recommendation from us.

The additions to the Zoological Society's Gardens during the past week include two Sloth Bears (*Melursus ursinus*, ♂ ♀) from India, presented by Sir Henry D. Tichborne, Bart.; a Macaque Monkey (*Macacus cynomolgus*, ♂) from Tonquin, presented by Miss Rachel Hunt; two Palm Squirrels (*Sciurus palmarum*) from India, presented by Dr. G. H. Nowell; a Long-eared Owl (*Asio otus*), British, presented by Major-General Alex. A. A. Kinlock; a Salt-water Terrapin (*Malæoclemmys terrapin*) from North America, presented by Mr. H. Arthur Clifton; five Tesselated Snakes (*Tropidonotus tesselatus*) from South-east Europe, presented by Herr Carl Hagenbeck; a Mediterranean Peregrine Falcon (*Falco pincus*), captured in the Mediterranean, presented by Captain Watson; ten Paradise Whydah Birds (*Vidua paradisea*), three Pin-tailed Whydah Birds (*Vidua principalis*), four Crimson-eared Waxbills (*Estrelda phœnicotis*), two Red-bellied Waxbills (*Estrelda rubriventris*), two Yellow-rumped Seed-eaters (*Crithagra chrysopyga*), a Singing Seed-eater (*Crithagra musica*) from West Africa, a One-wattled Cassowary (*Casuarius uniappendiculatus*) from New Guinea, two Jackass Penguins (*Spheniscus magellanicus*) from the Falkland Islands, a Black Wood-hen (*Ocydromus fuscus*) from New Zealand, deposited; a Levaillant's Darter (*Plotus levaillanti*) from West Africa, purchased.

OUR ASTRONOMICAL COLUMN.

The Coming Total Eclipse of the Sun.—We must congratulate the British Astronomical Association on the energy they have displayed with regard to the coming eclipse in India. We hear that, in addition to the three official expeditions, a fourth, but unofficial, expedition under their auspices will be sent, and that no less than twenty-six observers have come forward to take part in it. It must not be forgotten that considerable expense is attached to such undertakings, and so large a number of observers shows that the general interest taken in such an event is very considerable.

Those who wish to combine an enjoyable winter's cruise in warm climes, with a view of the eclipse thrown in, may have noticed that the Orient Liner's steamer *Orotava* is timed to leave Colombo on January 20 next, and on her homeward voyage from Australia she will be navigated with a view to being on the line of central eclipse at the time of total obscuration. Passengers can thus proceed to Colombo, and after a short stay there, allowing sufficient time to see Ceylon, return by this vessel home, seeing the eclipse on the way. Particulars can be obtained from the Company's offices in Fenchurch Avenue, E.C.